ABSTRACT

TITLE:

TO ESTIMATE THE CORRELATION BETWEEN SERUM SIALIC ACID LEVELS WITH MICROALBUMINURIA AND GLYCATED HEMOGLOBIN IN DIABETIC NEPHROPATHY PATIENTS

STUDY BACKGROUND :

Several studies here demonstrated increased Serum Sialic Acid levels in diabetic nephropathy patients. The current study was designed to investigate the role of serum sialic acid as a major risk factor in the development of diabetic nephropathy and to correlate the clinical relationship of serum sialic acid with glycated haemoglobin and the marker of diabetic nephropathy such as microalbuminuria.

OBJECTIVES:

TO ESTIMATE THE CORRELATION BETWEEN SERUM SIALIC ACID LEVELS WITH MICROALBUMINURIA AND GLYCATED HEMOGLOBIN IN DIABETIC NEPHROPATHY PATIENTS

METHODS:

A sample size of 50 patients each with diabetic nephropathy and healthy controls irrespective of age and gender were included in the study. FBS , PPBS, Blood Urea, Serum Creatinine, Serum Sialic Acid and Urine Albumin were compared between the diabetic nephropathy patients and normal controls.

RESULTS:

The mean FBS in cases and controls was 196.32mg/dl and 80.62mg/dl respectively. The mean PPBS in cases and controls was 285.54mg/dl and 133.42mg/dl respectively. Their association was statistically significant with the P value of < 0.001. The mean values of Glycated haemoglobin among cases and controls was 10.09 and 6.21 respectively and their association was statistically significant. (P <0.001) The mean Blood Urea among cases and controls was 56.12mg/dl and 21.86mg/dl respectively and association between them was statistically significant. (p <0.001) The mean Serum Creatinine values among cases and controls was 2.54mg/dl and 1.11mg/dl respectively and association between them was statistically significant. (p<0.001) The mean values of Serum Sialic Acid among cases and controls was 3.01mmol/L and 1.89mmol/L respectively and their association was statistically significant. (p<0.001) The mean value of microalbuminuria among cases and controls was 131.84mg/L and 10.45mg/L respectively and their association was highly significant. (P<0.001) The correlation studies revealed a positive correlation between Serum sialic acid with FBS, PPBS, Glycated haemoglobin and Serum creatinine in diabetic nephropathy cases.

CONCLUSION:

Thus the study proves the role of Serum Sialic acid as a major risk factor in the development of diabetic nephropathy. The clinical relationship of Serum sialic acid with Glycated Hemoglobin and marker of diabetic nephropathy such as microalbuminuria is also proved.

KEYWORDS:

FBS , PPBS, Glycated Hemoglobin (%), Serum creatinine , Blood Urea, Serum Sialic Acid, Microalbuminuria.